

REMARKS

Status of the Claims

Applicants note that amendments to the claims and specification filed June 15, 2004 were not entered by the Examiner. See Advisory Action mailed July 8, 2004, page 2, lines 1-4. Therefore, the current amendments to the claims are provided relative to the most recently entered amendments. See Amendment filed November 17, 2003.

With this amendment, Applicants amend claims 1 and 2, cancel claims 3-16 without prejudice to future prosecution, and add new claims 17-26. Therefore, with entry of this amendment, claims 1, 2, and 17-26 are pending.

Claim 1 has been amended to correct various typographical and grammatical errors. In addition, the terms "S," "--CHR₂OCO(CH₂)_nCH₃--," and "acyloxy-alpha-benzyl" have been deleted from claim 1; and (VI) has been removed from claim 2. It is respectfully noted that where the specification discloses how to make and use a genus and numerous species therein, Applicants may properly amend the claims by subtracting members of the genus. See *In re Johnson*, 194 USPQ 187 (CCPA 1977). With the deletion of "S," "--CHR₂OCO(CH₂)_nCH₃--," "acyloxy-alpha-benzyl," and (VI), Applicants have merely subtracted members of the original genus in compliance with *In re Johnson*.

Claim 2 has been amended to recite that R₃ is a direct bond. Support for this amendment may be found, for example, in the specification at page 14, line 3, and original claim 3. In addition, (V) in claim 2 has been amended to conform to its acid equivalent. Applicants respectfully submit that one skilled in the art would immediately recognize that the sulfite ion may readily exist as its acid equivalent. See MPEP §2163.02, discussed below in more detail. Claim 2 has also been amended by replacing the symbol "Me" in (VII) with "CH₃." The symbol "Me" is commonly recognized in the art as an abbreviation for methyl. Therefore, Applicants respectfully submit that one skilled in the art would immediately recognize that "Me" and "CH₃" are equivalent.

New claims 17 to 26 have been added. Support for claims 17 and 18 may be found, for example, in original claims 1 and 2; and at page 12, line 11 to page 13, line 5.

Support for claims 19-26 may be found, for example, at page 16, line 3; Table 1; original claim 4; and FIG.'s 1-6. Applicants respectfully note that the test for support of the subject matter of a claim is whether the disclosure of an application "*reasonably conveys* to the artisan that the inventor had possession at that time of the later claimed subject matter." See *Ralston Purina Co. v. FarMar-Co., Inc.*, 227 USPQ 177, 179 (Fed. Cir. 1985) (emphasis added). Moreover, the MPEP explicitly recognizes the principle that the "*subject matter of the claim need not be described literally* (i.e., using the same terms or *in haec verba*) in order for the disclosure to satisfy the description requirement." See MPEP §2163.02 (emphasis added). Applicants respectfully submit that their disclosure (e.g., at page 16, line 3; Table 1; original claim 4; and FIG.'s 1-6) reasonably conveys possession of the compounds of claims 19-26 to the skilled artisan.

Therefore, no new matter is added with entry of these amendments.

Rejection under 35 U.S.C. §102(b)

The Examiner has rejected claim 1 as anticipated by Quante et al. (U.S. Patent No. 5,338,843)..

In light of the amendments to claim 1, Applicants respectfully submit that Quante et al. fails to describe, either expressly or inherently, each and every element as set forth in amended claim 1. See MPEP § 2131 (quoting *Verdegaal Bros. v. Union Oil Co.*).

Claim 1 as amended recites that "A is selected from the group consisting of O, SO, SO₂, and CH₂." Quante et al. disclose only those compounds in which A is S. Because Quante et al. fail to disclose compounds in which A is O, SO, SO₂, or CH₂, Applicants respectfully submit that claim 1 is not anticipated.

Applicants further submit that claims 17-26 are not anticipated by Quante et al. Claim 17 recites that R₃ is a direct bond, thereby creating an ether linkage in the compound of claim 17. The compounds of claims 19-26 also contain an ether linkage. Quante et al. fail to disclose an ether linkage at the corresponding position in the fluorogenic substrates set forth in U.S. Patent No. 5,338,843. Rather, Quante et al. teach that the corresponding linkage is

preferably "a carbamate, carbonate, thiocarbamate, or thiocarbonate." See column 3, lines 38-40; column 5, lines 42-55, and claim 1.

Rejections under 35 U.S.C. §112, second paragraph: Indefiniteness

In the Official Action dated January 15, 2004, the Examiner rejected claims 1-3 as indefinite for recitation of:

- (1) "Me" in (VII) of claim 2;
- (2) "ammonium cations" in claim 1;
- (3) "acyl" in claim 1;
- (4) "linker" in claim 2; and
- (5) minus charges with no counter ions in (V) of claim 2.

Applicants have amended claims 1 and 2 by replacing the term "Me" with "CH₃," replacing the term "ammonium cations" with "ammonium cation," deleting the term "acyl," deleting the term "linker," and replacing the minus charges with the equivalent acid form of (V). Therefore, Applicants submit that the indefiniteness rejection is now moot.

The Examiner further asserts that it is not clear whether "ammonium cation" includes a substituted ammonium cation. Applicants respectfully submit that, in order to encompass a substituted ammonium cation, claim 1 must specify that the ammonium cation is substituted. Because claim 1 does not recite a substituted ammonium cation, one skilled in the art would recognize that the term "ammonium cation" refers to NH₄⁺.

Rejection under 35 U.S.C. §112, first paragraph: Enablement

The Examiner asserts that the specification fails to show the utility of compounds in which Z is attached via a double bond. To the extent this enablement rejection applies to currently pending claims 19-26, Applicants respectfully disagree.

At page 7, lines 12-19, and Figures 1-6, the specification sets forth various examples of compounds having a double bonded Z group that are useful as β-lactamase substrates in reporter assays. For example, at page 7, line 13, the specification recites that "enzymatic fragmentation" may be performed on compounds having a double bonded Z. The "enzymatic fragmentation" referred to on page 7 is further described in Figure 2, which clearly

sets forth an exemplary enzymatic reaction in which β -lactamase cleaves a compound having a double bonded Z. Figure 2 further sets forth fluorescent intensity data in the presence and absence of β -lactamase. In the presence of β -lactamase, a dramatic increase in fluorescence intensity is shown between 580 nm and 600 nm relative to the intensity in the absence of β -lactamase.

Moreover, the specification provides an example of cellular β -lactamase detection using a compound having a double bonded Z at page 7, line 18, and Figure 6. β -lactamase transfected cells showed increased resorufin deposition relative to wild type cells using a compound having a double bonded Z.

Because the specification sets forth multiple examples demonstrating the utility of compounds with Z attached via a double bond that are useful as β -lactamase substrates in reporter assays, Applicants respectfully request withdrawal of the rejection under 35 U.S.C. §112, second paragraph.

Rejection under 35 U.S.C. §112, first paragraph: New Matter

The Examiner asserts that the specification fails to comport with the written description requirement because:

- (1) the definition of n added to claim 1 is new matter; and
- (2) the use of the R' variable in (VI) of claim 2 is new matter.

Applicants have removed the definition of n in claim 1 and deleted (VI) from claim 2. Therefore, Applicants respectfully submit that the rejection is now moot and request withdrawal of the rejection.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance and an action to that end is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at (858) 350-6100.

Respectfully submitted,



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Attachments
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